## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 7 April 2005 (07.04.2005)

**PCT** 

(10) International Publication Number WO 2005/031900 A2

- (51) International Patent Classification7:
- \_\_\_\_

H01M 8/00

(21) International Application Number:

PCT/EP2004/010930

(22) International Filing Date:

30 September 2004 (30.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

MT2003A001881

1 October 2003 (01.10.2003) IT

- (71) Applicant (for all designated States except US): NUVERA FUEL CELLS EUROPE S.R.L. [IT/IT]; Via Bistolfi, 35, I-20134 Milano (IT).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): TORO, Antonino [IT/IT]; Via Morandi, 17, I-20090 Segrate (IT).
- (74) Agent: MÜLLER, Uwe; Reistötter, Kinzebach & Partner (GbR), Sternwartstrasse 4, 81679 München (DE).

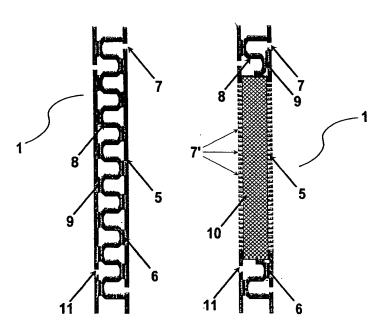
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BIPOLAR SEPARATOR FOR FUEL CELL STACK



(57) Abstract: It is described a bipolar separator for polymer membrane fuel cell stacks, delimited by two sheets provided with fluid passage holes connected by means of a corrugated element and comprising a passage section for a thermostatting liquid, which allows to achieve the withdrawal of heat from the adjacent cells and the humidification and distribution of gases with a single integrated piece, simplifying the assembly and the hydraulic sealing of the stack.